**5.4 Dividing Monomials**

**Quotient Rule** **x7  = x5**

**x2**

* Use only when the bases are the same
* Divide the coefficients
* Keep the base
* Subtract the exponents

**Quotient to a Power Rule (x/y)2 = x2/y2**

* When an entire fraction is raised to a power
* Raise the numerator to the power
* Raise the denominator to the power

**Zero Power xo = 1**

* Any number (except for zero) raised to the zero power equals 1
* Zero to the zero power is undefined

**Negative Powers**

* When terms are completely simplified negative powers are not allowed
* When you have negative powers think “fractions”
* Negative powers “move” and become positive
* If the negative power is in the bottom it moves to the top and becomes positive
* If the negative power is in the top it moves to the bottom and becomes positive

**There is usually more than one way to correctly simplify these expressions.**

* **Try to get rid of negative exponents first**
* **Simplify fractions as much as possible.**
* **Simplify any powers of powers**